

### **REMARKS**

The Office Action of February 1, 2007 has been reviewed and the Examiner's comments carefully considered. The present Amendment amends claims 21 and 22 in accordance with the specification and drawings as originally filed. No new matter has been added. Therefore, claims 21-39 are pending in this application, and claim 21 is in independent form.

#### **35 U.S.C. §102(b) Rejections**

Claims 21-24 stand rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,108,167 to Kandpal et al. (hereinafter "the Kandpal patent"). In view of the above amendments and the following remarks, the Applicants respectfully request reconsideration of this rejection.

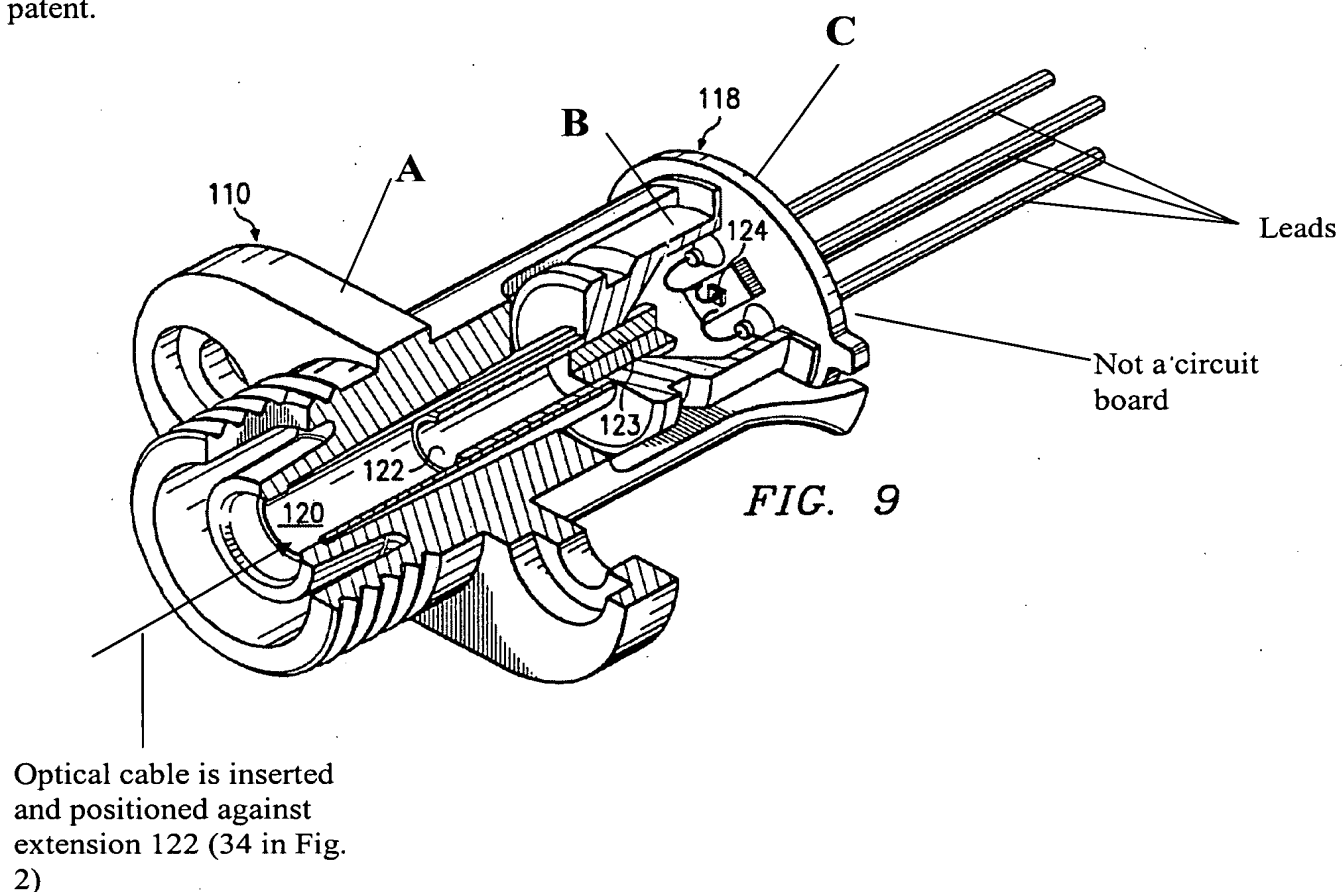
As defined by independent claim 21, the present invention is directed to a connector for the detachable connection of at least one optical waveguide to at least one optoelectronic component. The optoelectronic component is arranged and electrically contacted as a chip on the surface of a support which is a circuit board, and has an optical axis perpendicular to the support. The optical waveguide includes a fiber-optic plug connector. The connector includes a base part which is fastened on the surface of the support surrounding the optoelectronic component, whereby the base part only partially covers the surface of the support, and which has a through-hole for optical signals to be exchanged between the optoelectronic component and the optical waveguide. The optical waveguide also includes a coupling part which is a modular part and is exclusively mounted to the base part facing outward and which has an insertion opening and a passage for the releasable insertion of the fiber-optic plug connector. The base part can be connected on one side to the coupling part and has on another side an adapter with which the base part can be placed onto the circuit board.

The Kandpal patent is directed to an optical module including a base (20) having a pair of leads (22, 24). A laser diode (26) for generating laser light is positioned on the base (20). A cap (30) with a cylindrical lens (32) and a barrel portion (34) is attached to the base (20). The barrel portion (34) of the cap (30) serves as a distance establishing tool for the light generated by the laser diode (26). A fiber optic cable core (36) of a fiber optic cable

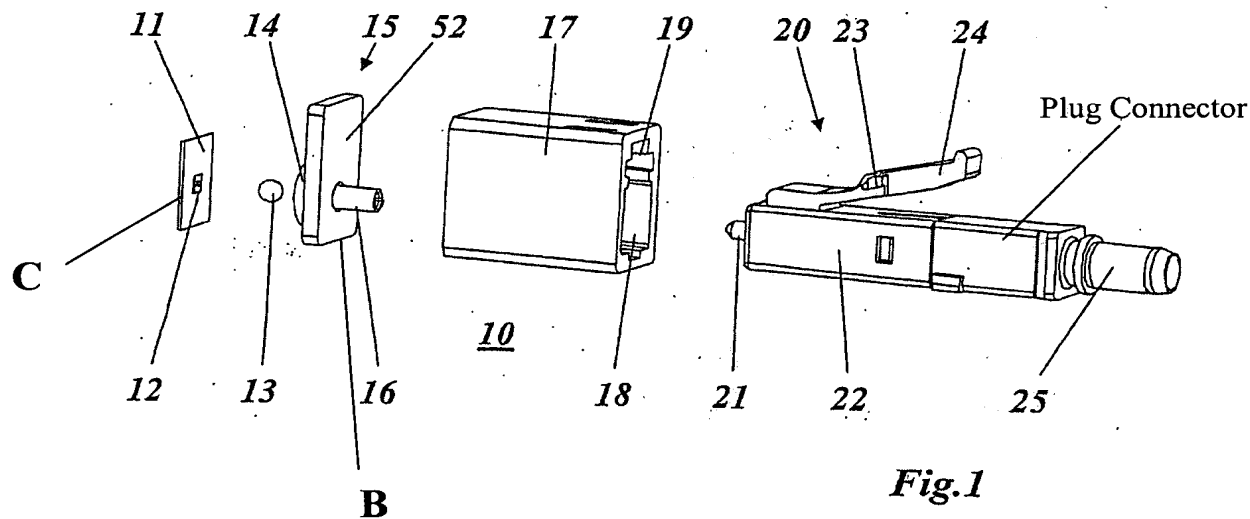
connector has an outer case (38) adapted to be positioned adjacent to the barrel portion (34) of the cap (30) (see Fig. 2). A base (110) may be provided to receive the optical module therein as shown in Figs. 8 and 9.

The Kandpal patent does not teach or suggest several of the elements required by independent claim 21. First, the Kandpal patent does not teach or suggest that the support is a circuit board. The Examiner contends that the base (20) of the Kandpal patent is equivalent to the support of independent claim 21. However, the base (20) is described in the Kandpal patent as including a pair of leads (22, 24) and is not a circuit board.

Additionally, the Kandpal patent fails to teach or suggest a modular coupling part as required by amended independent claim 21. The following figures illustrate and compare the connector of the present invention and the connector disclosed in the Kandpal patent.



**Connector of the Kandpal Patent**



**Connector of the Present Invention**

The part labeled A (i.e., base (110)) in the figure illustrating the connector of the Kandpal patent is designed to receive a fiber optic cable therein. The fiber optic cable is received within a cavity (120) and is positioned against the extension (122 or 34 in Fig. 2) of the cap (30). Accordingly, the base (110) can most closely be compared to the fiber-optic plug connector (20) of the present invention. The Examiner contends that the outer case (38) of the fiber optic core (36) of the Kandpal patent is equivalent to the fiber-optic plug connector of independent claim 21. However, the base (110) of the Kandpal patent is more equivalent to the plug connector of independent claim 21 for the reasons discussed above. The base (110) of the Kandpal patent is not a releasable plug connector and cannot be releasably inserted into a coupling part. Therefore, the base (110) cannot be both the fiber-optic plug connector and the coupling part, as required by independent claim 21.

Furthermore, the Kandpal patent fails to teach or suggest that the coupling part is a modular part as required by independent claim 21. This modular design allows the coupling part to be changed in order to receive a different plug connector. The coupling part receives the plug connector in a passage and guides the plug connector. Accordingly, the

coupling part is responsible for the mechanical tasks associated with the plug connection as discussed on page 10, line 35 - page 11, line 1 of the specification of the present application.

Additionally, the Kandpal patent fails to teach or suggest that the coupling part is exclusively mounted to the base part of the connector, as required by independent claim 21. The Examiner contends that the base (110) in Figs. 8 and 9 of the Kandpal patent is equivalent to the coupling part of claim 21. Even assuming that the Examiner's contention is correct and the base (110) is equivalent to the coupling part, Figs. 8 and 9 both clearly illustrate that the base (110) of the Kandpal patent is coupled to the barrel portion (34) of the cap (30) and to the base (20). Therefore, the base (110) disclosed by the Kandpal patent cannot be considered to be exclusively mounted to the base part (i.e., cap (30)), as required by independent claim 21.

For the foregoing reasons, the Applicants believe that the subject matter of amended independent claim 21 is not anticipated by the Kandpal patent. Reconsideration of the rejection of claim 21 is respectfully requested.

Claims 22-24 depend from and add further limitations to amended independent claim 21 or a subsequent dependent claim and are believed to be patentable for the reasons discussed hereinabove in connection with amended independent claim 21. Reconsideration of the rejection of claims 22-24 is respectfully requested.

### 35 U.S.C. §103 Rejections

Claims 25-31 and 39 are rejected under 35 U.S.C. §103(a) for obviousness based on the Kandpal patent, and claims 32-38 are rejected under 35 U.S.C. §103(a) for obviousness over the Kandpal patent in view of United States Patent No. 5,708,743 to DeAndrea et al. (hereinafter "the DeAndrea patent"). In view of the above amendments and the following remarks, the Applicants respectfully request reconsideration of these rejections.

Claims 25-31 and 39 depend from and add further limitations to amended independent claim 21 or a subsequent dependent claim and are believed to be patentable for the reasons discussed hereinabove in connection with amended independent claim 21. Reconsideration of the rejection of claims 25-31 and 39 is respectfully requested.

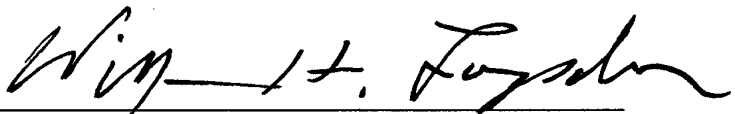
Claims 32-38 depend from and add further limitations to amended independent claim 21. The Kandpal patent was discussed hereinabove in connection with

amended independent claim 21. The DeAndrea patent is directed to a connector for optically coupling a fiber optic transmission line and an opto-electronic device, and is provided by the Examiner as allegedly teaching the use of a hemispherical lens that simultaneously deflects and focuses the light rays. The DeAndrea patent does not cure the deficiencies of the Kandpal patent. Therefore, claims 32-38 are believed to be patentable for the reasons discussed hereinabove in connection with amended independent claim 21. Reconsideration of the rejection of claims 32-38 is respectfully requested.

Based on the foregoing amendments and remarks, reconsideration of the rejections and allowance of pending claims 21-39 are respectfully requested.

Respectfully submitted,

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